



30% PLAN SUBMITTAL  
CONCEPT DESIGN

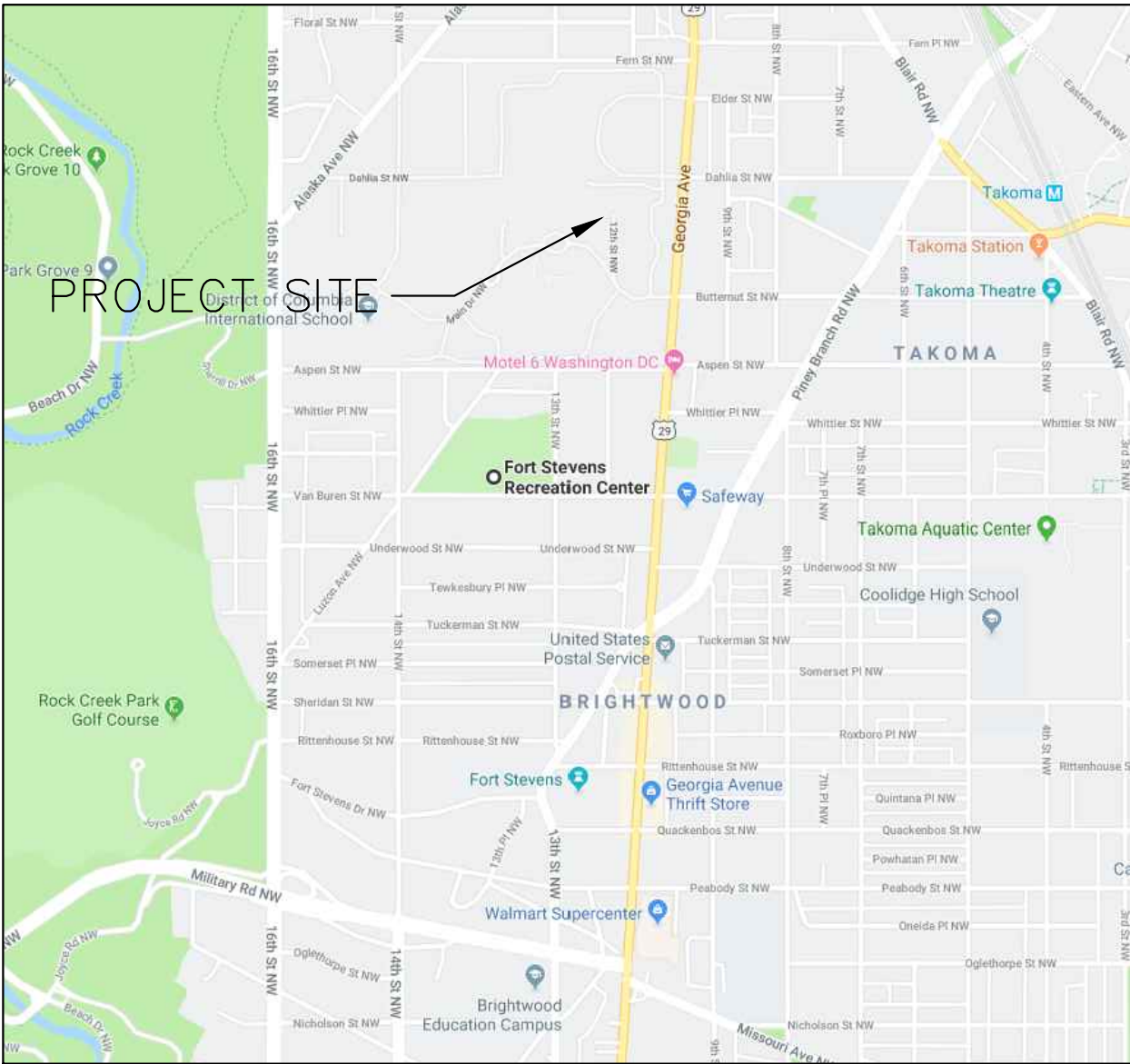
# FORT STEVENS COMMUNITY CENTER

## DPR II - 4 PARKS STORMWATER IMPROVEMENTS

1327 VAN BUREN STREET NW  
DISTRICT OF COLUMBIA

SEPTEMBER 4, 2019

NRD PROJECT #193003



VICINITY MAP  
SCALE: NONE

PROJECT DESCRIPTION

THE PURPOSE OF THIS DOE-FUNDED PROJECT IS TO CONSTRUCT STORMWATER IMPROVEMENTS TO REDUCE RUNOFF AND NON-POINT POLLUTION. PROPOSED IMPROVEMENTS INCLUDE A RAINWATER HARVESTING AND REUSE SYSTEM, TWO BIORETENTION BASINS, SLOPE STABILIZATION AND RELATED SITE MODIFICATIONS.

DC PERMIT REVIEW AGENCIES

DISTRICT DEPARTMENT OF CONSUMER AND REGULATORY AFFAIRS (DCRA)  
1100 4TH STREET, SW  
WASHINGTON, DC 20024  
(202) 442-4400

DEPARTMENT OF ENERGY AND THE ENVIRONMENT  
1200 FIRST STREET, NW  
WASHINGTON, DC 20002  
(202) 535-2600

DISTRICT DEPARTMENT OF TRANSPORTATION (DDOT)  
55 M STREET, SE  
WASHINGTON, DC 20003  
(202) 671-2700

CIVIL SHEET LIST

Sheet Number	Sheet Title
C000	COVER SHEET
C001	ABBREVIATIONS & STANDARD NOTES
C100	EXISTING CONDITIONS
C300	DRAINAGE AREAS
C310	STORMWATER MANAGEMENT PLAN
C320	STORMWATER MANAGEMENT DETAILS

PROJECT CONTACTS

OWNER/APPLICANT: DISTRICT OF COLUMBIA  
DEPARTMENT OF PARKS AND RECREATION  
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WASHINGTON, DC 20009  
CONTACT: PETER NOHRDEN  
EMAIL: PETER.NOHRDEN@DC.GOV

DOEE PROJECT MANAGER: CECILIA LANE  
ENVIRONMENTAL PROTECTION SPECIALIST  
ADDRESS: 1200 FIRST STREET NE, 5TH FLOOR  
WASHINGTON, DC 20002  
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(202) 734-9527 - CELL  
EMAIL: CECILIA.LANE@DC.GOV

ENGINEER/CONTRACTOR: NATURAL RESOURCES DESIGN, INC.  
CONTRACTOR LIC. NO: 410517000208  
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SURVEYOR: DRAPER ADEN ASSOCIATES, INC.  
CONTACT: JOHN KROBATH, LS  
ADDRESS: 7936 COPPERMINE ROAD  
MANASSAS, VA 20109  
(804) 264-2228  
JKROBATH@DAA.COM

SITE SUMMARY

SITE ADDRESS: 1327 VAN BUREN ST., NW  
WASHINGTON, DC  
SSL NUMBER: PAR 89/64  
SQUARE: 2764  
LOT SIZE: ~8 ACRES  
DISTURBED AREA: TBD

30% PLAN  
SUBMITTAL

DPR II - 4 PARKS  
STORMWATER  
IMPROVEMENTS

FORT STEVENS  
COMMUNITY CENTER

1327 VAN BUREN STREET NW  
WASHINGTON, DC

Natural  
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Design

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1009 SHEPHERD ST. NE  
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CBE# LSR80160022021

PROGRESS  
PRINT.  
NOT FOR  
CONSTRUCTION

Designed: C. SONNE  
Drawn: C. SONNE  
Checked: L. WHEELER

Date: AUGUST 2019  
Revisions:

COVER SHEET

C000



CONDITIONS OF PUBLIC SPACE PERMITS

PUBLIC SPACE PERMITS ARE ONLY GRANTED IN THE DISTRICT, BY THE POLICY, PLANNING AND SUSTAINABILITY ADMINISTRATION (PPSA), UNDER CERTAIN CONDITIONS.

1.

PERSONS REGULARLY PERFORMING PUBLIC SPACE EXCAVATION AND MANHOLE WORK ARE REQUIRED TO PROVIDE, ON A BIWEEKLY BASIS, PLANS SHOWING THEIR ANTICIPATED ACTIVITIES IN THE PUBLIC SPACE WITHIN THAT TWO-WEEK PERIOD.
2.

NO WORK SHALL BE UNDERTAKEN IF THE APPLICANT, OR THE PERSON ON WHOSE BEHALF THE APPLICATION IS MADE, HAS OUTSTANDING RESTORATION IN THE PUBLIC SPACE. THIS RESTRICTION WILL ALSO APPLY TO APPLICANTS WITH TEMPORARY REPAIRS THAT HAVE FAILED AND THE APPLICANT DID NOT UNDERTAKE RESTORATION WITHIN 24 HOURS OF NOTIFICATION BY THE OFFICE OF INFRASTRUCTURE OVERSIGHT (OIO).
3.

PERMANENT RESTORATIONS MUST BE COMPLETED PRIOR TO THE WINTER SUSPENSION PERIOD, WHICH IS FROM NOVEMBER 1 THROUGH MARCH 31.
4.

DC LAW 3129, UNDERGROUND FACILITIES PROTECTION ACT OF 1980, REQUIRES CONTACTING THE 'MISS UTILITY' AT (800) 257-7777 AT LEAST 48 HOURS AND NOT MORE THAN 10 DAYS (EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS) PRIOR TO THE START OF EXCAVATION. THIS IS REQUIRED SO NOTIFICATIONS CAN BE MADE TO PARTICIPATING PRIVATE UTILITY COMPANIES OF THE PROPOSED WORK.
5.

IMPROPER HOUSEKEEPING VIOLATIONS ON JOB SITES RELATING TO DIRT AND DEBRIS IN THE PUBLIC SPACE SHALL BE GROUNDS FOR A FINE OF \$500.00 PER BLOCK PER DAY AND/OR REVOCATION OF THIS PERMIT.
6.

AUTHORIZED WORK SHALL BE IN ACCORDANCE WITH THE SAFETY REQUIREMENTS FOR EXCAVATION AS OUTLINED IN THE DC DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES.
7.

WORK AUTHORIZED BY THIS PERMIT SHALL BE IN ACCORDANCE WITH REQUIREMENTS SET FORTH IN FHWA 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES' AND TRAFFIC CONTROL DEVICES MUST BE ARRANGED ACCORDING TO THE APPROVED TRAFFIC CONTROL PLANS FOR THIS PROJECT.
8.

ACCESS TO ALLEYS, DRIVEWAYS, AND ROADWAYS MUST BE MAINTAINED AT ALL TIMES. THE TRAFFIC SERVICES ADMINISTRATION AND FIRE MARSHALL MUST APPROVE ANY CLOSURES OF THE RIGHTS-OF-WAY AND THE PERMIT MUST REFLECT THIS APPROVAL.
9.

WHERE APPLICABLE, ALL INTERSECTIONS MUST BE PLATED.
10.

SIX (6) FEET OF SIDEWALK ACCESS MUST BE MAINTAINED AT ALL TIMES. THE TRAFFIC SERVICES ADMINISTRATION MUST APPROVE ANY CLOSURES OF THE RIGHTS-OF-WAY AND THE PERMIT MUST REFLECT THIS APPROVAL.
11.

THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND SALVAGING ALL COBBLESTONE PAVERS AND OTHER SPECIAL PAVERS REMOVED IN CONNECTION WITH EXCAVATION. THE CONTRACTOR MUST SECURE AND STORE MATERIALS AT CONTRACTOR'S EXPENSE AND REINSTALL ALL MATERIALS DEEMED SPECIAL OR HISTORIC AS DIRECTED BY DISTRICT ENGINEERS OR OIO.
12.

ALL STREETLIGHT AND TRAFFIC SIGNAL CABLES MUST BE SAFEGUARDED AT ALL TIMES.
13.

STORAGE OF EQUIPMENT AND/OR SUPPLIES IS PROHIBITED IN PUBLIC SPACE WITHOUT A PERMIT EXPRESSLY AUTHORIZING IT.
14.

PARKING ON NON-COMMERCIAL, PRIVATE VEHICLES IS PROHIBITED IN THE PUBLIC SPACE SUBJECT TO THE PUBLIC SPACE PERMIT.
15.

ACCESS TO ON STREET PARKING MUST BE AVAILABLE AT ALL TIMES WHEN WORK IS NOT ALLOWED.
16.

THE CONTRACTOR SHALL NOTIFY THE TRAFFIC SERVICES ADMINISTRATION PRIOR TO COMMENCEMENT OF WORK (202) 671-2700.
  - CONTRACTOR SHALL MAINTAIN TWO LANES OF TRAFFIC AT ALL TIMES
  - ADVANCE WARNING SIGNS SHALL BE 43x48 FLORESCENT ORANGE
  - WORK HOURS ARE 9:30 AM TO 3:30 PM UNLESS ALLOWED OTHERWISE BY PERMIT.
17.

IF THE WORK ZONE WILL BLOCK METERS OR AFFECT METERED PARKING SPACES IN SUCH A MANNER AS TO PREVENT FREE FLOW OF TRAFFIC, THESE METERS NEED TO BE RENTED FROM THE METER BRANCH OF PARKING SERVICE AT (202) 671-2700. THE PERMIT HOLDER MUST CONTACT THE METER BRANCH AS SOON AS IDENTIFYING THIS IMPACT. TEN BUSINESS DAYS ARE NECESSARY FOR PROCESSING THE REQUESTS.
18.

THE OFFICE OF INFRASTRUCTURE OVERSIGHT MUST BE NOTIFIED 48 HOURS IN ADVANCE OF STARTING WORK AT (202) 645-6050.
19.

THERE MUST BE NO MORE THAN 1200 FEET EXCAVATED AT ONE TIME.
20.

THE PERMIT HOLDER IS REQUIRED TO REPAIR ALL FAILED CUTS WITHIN 24 HOURS OF NOTIFICATION BY THE DISTRICT DEPARTMENT OF TRANSPORTATION, OFFICE OF INSTRUCTURE OVERSIGHT.
21.

NOTIFY THE OFFICE OF INFRASTRUCTURE OVERSIGHT FIVE DAYS PRIOR TO COMMENCEMENT OF RESTORATION CONSTRUCTION VIA FAX AT (202) 645-0759; IF YOU HAVE ANY QUESTIONS PLEASE CONTACT THE OIO AT (202) 645-7050.

GENERAL PUBLIC SPACE NOTES

1.

THE DDOT INSPECTOR IS AUTHORIZED TO MODIFY CONSTRUCTION IN PUBLIC SPACE, INCLUDING TRAFFIC CONTROL PLANS. THE CONTRACTOR SHALL ACCOMMODATE THE DDOT INSPECTOR'S REQUESTS IN REGARDS TO CONSTRUCTION IN PUBLIC SPACE.
2.

ALL WORK IN PUBLIC SPACE IS SUBJECT TO A DDOT PUBLIC SPACE PERMIT AND A DDOT APPROVED TRAFFIC CONTROL PLAN.
3.

ALL EXISTING PARKING METERS, ROAD SIGNS, AND TRAFFIC CONTROL DEVICES ARE TO REMAIN MUST BE VISIBLE AT ALL TIMES OR BE RELOCATED OR REPLACED IF AFFECTED BY THE CONSTRUCTION. COORDINATE WITH THE DDOT INSPECTOR.
4.

REFER TO APPLICABLE STANDARDS AND SPECIFICATIONS FROM DC WATER, DDOT, AND DDOE AS APPROPRIATE FOR CONSTRUCTION IN PUBLIC SPACE.
5.

PUBLIC SPACE ITEMS SHOWN TO BE DEMOLISHED MAY BE REQUIRED TO BE SALVAGED PER DDOT STANDARDS. COORDINATE WITH THE DDOT INSPECTOR.

GENERAL UTILITY NOTES

1.

THE CONSTRUCTION WORK SHALL BE COMPLETED IN SUCH A WAY AS TO MINIMIZE UTILITY OUTAGES. ALL UTILITY OUTAGES MUST BE COORDINATED WITH THE UTILITY OWNER AND AFFECTED PARTIES.
2.

SOME EXISTING UTILITIES MAY NOT BE SHOWN ON THE PLANS. BEFORE BEGINNING CONSTRUCTION, VERIFY THERE ARE NO CONFLICTS WITH EXISTING UTILITIES. TEST PIT AS REQUIRED TO DETERMINE LOCATIONS AND DEPTHS OF EXISTING UTILITIES WITHIN THE CONSTRUCTION WORK AREA. IF ANY EXISTING UTILITIES ARE FOUND WHICH ARE NOT DEPICTED IN THE EXISTING CONDITIONS PLAN OR CONFLICT WITH THE PROPOSED WORK NOTIFY NATURAL RESOURCES DESIGN.
3.

NOTIFY NATURAL RESOURCES DESIGN IF COVER FOR ANY UTILITY IS REDUCED BELOW THE MINIMUM REQUIRED.
4.

THE SITE CIVIL PLAN IS MEANT TO CONVEY 'WET' (SANITARY SEWER, STORM SEWER, AND WATER) UTILITY WORK. ALL 'DRY' (ELECTRIC, NATURAL GAS, TELECOMMUNICATIONS) UTILITY WORK SHOWN IS FOR INFORMATION AND REFERENCE ONLY.
5.

REFER TO DC WATER STANDARDS FOR ABANDONMENT OF EXISTING SANITARY SEWER, STORM SEWER, AND WATER LATERALS AND MAINS. THIS INVOLVES DISCONNECTING ALL LATERALS AT THE MAINS, PLUGGING AND SEALING THE MAINS, AND REMOVING ALL ABANDONED METERS, VALVES AND APPURTENANCES. COORDINATE WORK WITH DC WATER INSPECTOR.
6.

ALL WYE CONNECTIONS TO EXISTING SEWER LATERAL LINES SHALL MATCH THE EXISTING SIZE AND MATERIAL.
7.

ALL WATER SERVICE LATER TEES SHALL BE PROVIDED WITH A VALVE AS CLOSE AS POSSIBLE TO THE MAINS. IF NECESSARY DUE TO FIELD CONDITIONS OR CONFLICTS WITH OTHER UTILITIES, AND IN COORDINATION WITH DC WATER INSPECTOR, A DIP SWIVEL TEE (AWWA C111) MAY BE USED.
8.

REFER TO DC WATER STANDARDS AND SPECIFICATIONS FOR WATER PIPE MATERIAL. ALL WATER LINES 2-INCHES DIAMETER AND SMALLER SHALL BE TYPE K COPPER. ALL WATERLINES AND FITTINGS 3-INCHES DIAMETER AND LARGER SHALL BE RESTRAINED JOINT DUCTILE IRON.
9.

BACKFLOW PREVENTION VALVES FOR ALL DOMESTIC WATER SERVICE AND FIRE SUPPRESSION LATERALS SHALL BE PROVIDED INSIDE THE BUILDINGS UNLESS SPECIFICALLY NOTED OTHERWISE.
10.

REMOVE ABANDONED UTILITIES AS REQUIRED.
11.

ADJUST EXISTING STRUCTURE TOPS AND MANHOLES TO REMAIN WITHIN THE LIMITS OF DISTURBANCE TO MATCH FINAL GRADE AS REQUIRED. INSTALL ADDITIONAL STEPS WITHIN MANHOLES AS REQUIRED.
12.

PER DC WATER REQUIREMENTS, UTILITY AS-BUILT PLANS MUST BE SUBMITTED.
13.

REFER TO DC WATER GENERAL CONSTRUCTION NOTES, UTILITY NOTES AND UTILITY DETAILS FOR ADDITIONAL INFORMATION.

GENERAL DEMOLITION NOTES

1.

THE CONTRACTOR MUST OBTAIN A RAZE PERMIT TO DEMOLISH ANY STRUCTURE.
2.

REFER TO THE ARCHITECTURAL PLANS FOR SELECTIVE DEMOLITION RELATED TO INTERIOR RENOVATIONS. COORDINATE WITH THE DESIGN TEAM, INCLUDING THE STRUCTURAL ENGINEER, IN REGARD TO THE STABILITY OF EXISTING STRUCTURES TO REMAIN.
3.

DC WATER UTILITIES MUST BE DISCONNECTED AND ABANDONED PER DC WATER STANDARDS AND ARE SUBJECT TO DC WATER PERMITS. REFER TO UTILITY OWNERS' REQUIREMENTS AND STANDARDS TO DEMOLISH OR ABANDON UTILITIES.
4.

THE APPROXIMATE SCALE OF ABANDONMENT AND DEMOLITION OF SITE FEATURES AND UTILITIES ARE DEPICTED BOLD OR HATCHED ON THE DEMOLITION PLAN.
5.

DEMOLITION OF SITE FEATURES AND UTILITIES TO REPLACE ITEMS IN KIND ARE NOT NECESSARILY SHOWN BUT ARE WITHIN THE SCOPE OF WORK.
6.

SAWCUT EXISTING PAVEMENT TO BE REMOVED WHERE ADJACENT TO EXISTING PAVEMENT TO REMAIN. FOR CONCRETE AND GRANITE, SAWCUT AT THE NEAREST JOINT.
7.

ALL DEMOLITION DEBRIS MUST BE DISPOSED PER APPLICABLE LAW; DEMOLITION DEBRIS MAY ONLY BE USED FOR BACKFILL IF EXPRESS KNOWLEDGE AND PERMISSION IS GRANTED FROM THE STRUCTURAL AND GEOTECHNICAL ENGINEERS.
8.

REFER TO THE DEMOLITION NOTES AND DETAILS FOR ADDITIONAL INFORMATION.

GENERAL GRADING NOTES

1.

THE SITE MUST BE GRADED AND PAVED SO THAT NO NEW LOW POINTS WITHOUT PROPER DRAINAGE ARE CREATED; NO PONDING SHALL OCCUR ONSITE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE STORMWATER MANAGEMENT PLANS WITHIN BMP FACILITIES OR ON THE SEDIMENT CONTROL PLAN WITHIN SEDIMENT TRAPS OR BASINS.
2.

ALL PAVED SURFACES SHALL BE AT A 1.0% MINIMUM SLOPE. ALL GRASSED AND LANDSCAPED AREAS SHALL BE AT A 2.0% MINIMUM SLOPE. EXCEPTIONS MAY BE MADE ONLY IF APPROVED BY NATURAL RESOURCES DESIGN.
3.

SPOT ELEVATIONS SHOWN AT TIE-IN POINTS WITH EXISTING SURFACES ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR. PROPOSED ELEVATIONS MAY BE MODIFIED WITH APPROVAL FROM NATURAL RESOURCES DESIGN TO MATCH EXISTING GRADE.
4.

ANY UNSUITABLE IN SITU SOIL OR MATERIAL MUST BE REMOVED OR REMEDIATED PER DIRECTION FROM THE ENGINEER.
5.

REFER TO THE SITE NOTES AND DETAILS FOR ADDITIONAL INFORMATION.

GENERAL SITE CONSTRUCTION NOTES

1.

NATURAL RESOURCES DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION SAFETY, ACCIDENTS, OR SUPERVISION; NATURAL RESOURCES DESIGN IS NOT RESPONSIBLE FOR ANY CONSTRUCTION DAMAGE OR INJURY TO ANY PERSON, VEHICLE, EQUIPMENT, OR PROPERTY ON OR NEAR THE CONSTRUCTION SITE.
2.

NATURAL RESOURCES DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION SITE SECURITY. THE CONTRACTOR SHALL COORDINATE ALL TEMPORARY SITE SECURITY WITH THE OWNER AS REQUIRED AND APPROPRIATE.
3.

BEFORE COMMENCING CONSTRUCTION, CALL 'MISS UTILITY' TO FIELD MARK UNDERGROUND UTILITIES. FOLLOW MISS UTILITY REQUIREMENTS.
4.

THE EXTENT OF EXISTING STRUCTURES INCLUDING UNDERGROUND FEATURES MAY NOT BE DEPICTED ON THE PLANS.
5.

THE CONTRACTOR MAY MAKE FIELD ADJUSTMENTS TO ACCOMMODATE EXISTING CONDITIONS IF AUTHORIZED BY THE CLIENT, THE CLIENT'S REPRESENTATIVE, OR NATURAL RESOURCES DESIGN.
6.

ALL GENERAL NOTES ARE FOR TYPICAL CONSTRUCTION ACTIVITIES; THEY MAY INCLUDE INFORMATION THAT IS NOT APPLICABLE TO THE SCOPE OF THIS PROJECT.
7.

THE CODES AND STANDARDS SHOWN ON THE PLANS ARE FOR GENERAL INFORMATION ONLY. THEY DO NOT NECESSARILY REPRESENT THE MOST CURRENT OR COMPLETE STANDARDS REQUIRED FOR THE CONSTRUCTION. THE CONTRACTOR MUST REFER TO THE CORRECT, APPLICABLE CODES AND STANDARDS.
8.

ACCESS TO THE PROJECT PROPERTY AND ALL SURROUNDING AREAS MUST BE MAINTAINED FOR ALL EMERGENCY SERVICES, PEDESTRIANS, AND DELIVERIES IF REQUIRED AND AS APPROPRIATE. ACCESS TO FIRE HYDRANTS MUST NOT BE IMPAIRED.
9.

THE CONTRACTOR SHALL RESTORE OR REPLACE ANY ITEMS TO REMAIN THAT ARE DAMAGED DURING CONSTRUCTION TO ORIGINAL EXTENT, QUALITY AND CONDITION.
10.

REFER TO THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL INFORMATION.
11.

THE CONTRACTOR MUST MAINTAIN A SET OF CONSTRUCTION PLANS WHICH HAVE BEEN MARKED UP TO ACCURATELY CONVEY CONSTRUCTION WHICH HAS DEVIATED FROM THE APPROVED CONSTRUCTION PLANS. THESE PLANS MUST BE PROVIDED TO THE CLIENT, THE CLIENT'S REPRESENTATIVE, OR NATURAL RESOURCES DESIGN PRIOR TO THE PROJECT CLOSEOUT.

GENERAL PAVEMENT NOTES

1.

EXISTING PAVEMENT TO BE REPLACED SHALL AT MINIMUM MATCH THE EXISTING CROSS SECTION.
2.

EXISTING CURB AND/OR GUTTER TO BE REPLACED SHALL MATCH EXISTING TYPE, MATERIAL, AND DIMENSIONS.
3.

SAWCUT EXISTING ASPHALT PAVEMENT 1' FROM EDGE OF NEW CURB AND/OR GUTTER FOR REPLACEMENT.
4.

MILL AND OVERLAY EXISTING ASPHALT PAVEMENT 1' FROM EDGE OF NEW PAVEMENT TO PROVIDE SMOOTH TRANSITION.
5.

MILL AND OVERLAY EXISTING ASPHALT PAVEMENT 10' FROM EITHER SIDE OF UTILITY TRENCHES IN PUBLIC SPACE, EXTENDED TO THE FULL WIDTH OF ANY AFFECTED TRAVEL LANES. THE CONTRACTOR SHALL PROVIDE AN ADDITIVE BID PRICE FOR MILL AND OVERLAY WORK OF THE ENTIRE ROAD WIDTH AS THIS MAY BE REQUIRED BY THE DDOT INSPECTOR.

ABBREVIATIONS

ABND	ABANDONED	MAX	MAXIMUM
AD	AREA DRAIN	ADA	AMERICANS WITH DISABILITIES ACT
WW	WINDOW WELL	MEP	MECHANICAL/ELECTRICAL/PLUMBING
APPROX	APPROXIMATE	MH	MANHOLE
BFP	BACKFLOW PREVENTER	MIN	MINIMUM
BLDG	BUILDING	BRL	BUILDING RESTRICTION LINE
OC	ON CENTER	PROP	PROPOSED
SAN	SANITARY	BSMT	BASEMENT
SCH	SCHEDULE	FFE	FINISHED FLOOR ELEVATION
BW	BOTTOM OF WALL	STM	STORM
CI	CAST IRON	SWR	SEWER
CO	CLEANOUT	TC	TOP OF CURB
CS	COMBINED SEWER	TW	TOP OF WALL
ELEV	ELEVATION	VB	VERTICAL BEND
EX	EXISTING	VCP	VITRIFIED CLAY PIPE
W/	WITH	BM	BENCHMARK
HB	HORIZONTAL BEND	W/M	WATER MAIN



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IMPROVEMENTS

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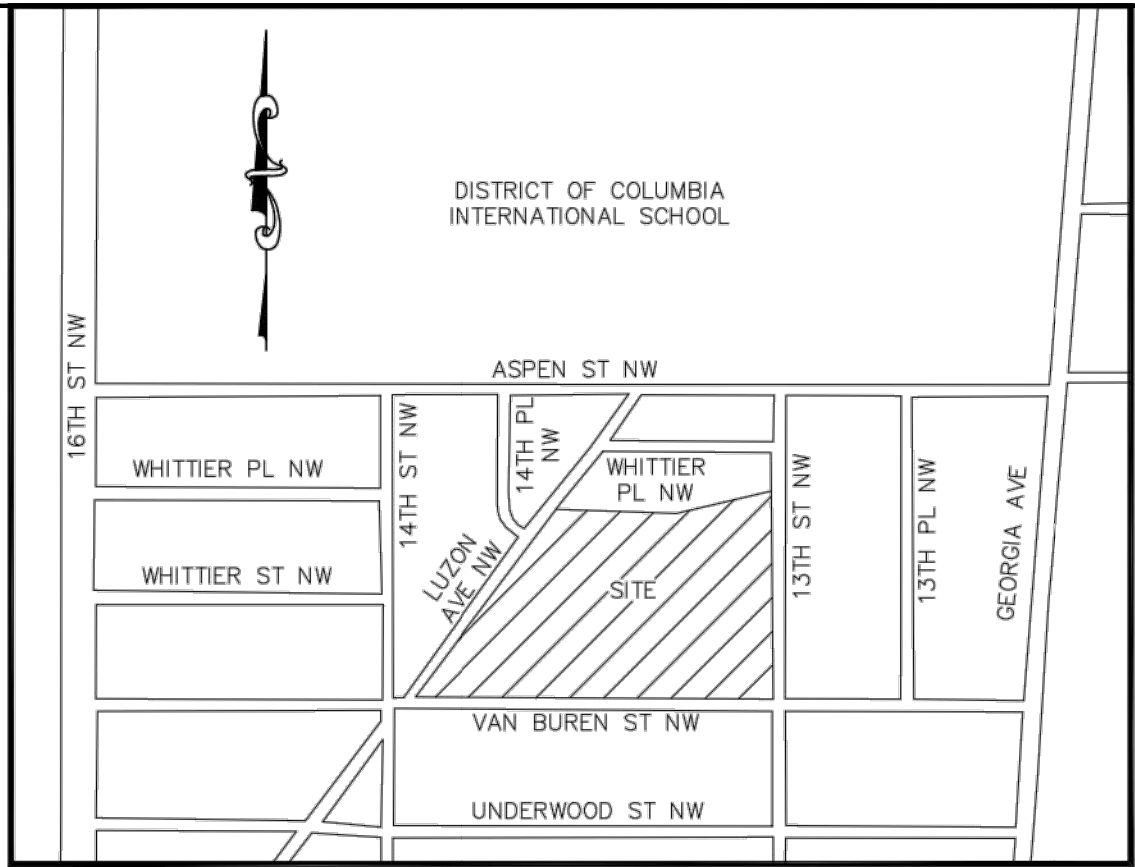
STANDARD NOTES &  
ABBREVIATIONS

Designed: C. SONNE  
Drawn: C. SONNE  
Checked: L. WHEELER

Date: AUGUST 2019  
Revisions:

C001





VICINITY MAP  
Scale: 1"=200'

#### NOTES:

- 1.) Source of Meridian: NAD83 based upon: GPS Observations on 6/13/2019.
- 2.) Vertical datum: NAVD88 based upon: GPS Observations on 6/13/2019.
- 3.) This survey was prepared without the benefit of a title commitment or title report and all easements and encumbrances that might be disclosed in a title search may not be shown.
- 4.) Utilities shown are based upon:
  - \_\_\_ SUE Quality Level D, ASCE 38-02 - compiled records only
  - \_\_\_ SUE Quality Level C, ASCE 38-02 - visible evidence in conjunction with compiled records.
  - X SUE Quality Level B, ASCE 38-02 - field designation of underground utilities performed by DAA and visible evidence in conjunction with compiled records.
  - \_\_\_ SUE Quality Level A, ASCE 38-02 - test pits at locations shown hereon performed by (DAA; Other) in conjunction with field designation of underground utilities performed by (DAA; Miss Utility, Ticket # \_\_\_\_\_; Other), visible evidence and compiled records.
  - \_\_\_ No SUE was performed or requested for this survey. Utilities shown hereon are based on field observation only.
- 5.) This topographic survey was completed under the direct and responsible charge of John E. Krobath from an actual Ground survey made under my supervision; that the imagery and/or original data was obtained on 7/16/2019; and that this plat and/or map meets minimum accuracy standards unless otherwise noted.
- 6.) Contour interval: 1'.
- 7.) This survey was prepared for Natural Resources Design. Draper Aden Associates assumes no liability for reuse or modification of this document.
- 8.) Property lines are not shown.
- 9.) Draper Aden Associates provides benchmarks for the construction of the improvements shown on these plans. All other existing elevations are for reference to existing conditions only. Do not use spot elevations, finish floor elevations, elevations on manholes, elevations on survey nails, survey hubs, control points (horizontal points provided) or any other points for construction other than the provided benchmarks. Failure to utilize and verify the provided benchmarks could result in damages and additional cost that are the contractor's responsibility.
- 10.) The property shown hereon is located in Flood Zone X based on a scaled location on FIRM panels #110001006C and #1100010010C effective date September 27, 2010. This flood determination is not a recommendation by Draper Aden Associates to not purchase or purchase Flood Insurance Coverage and does not imply that the referenced property will or will not be free from flood damage.

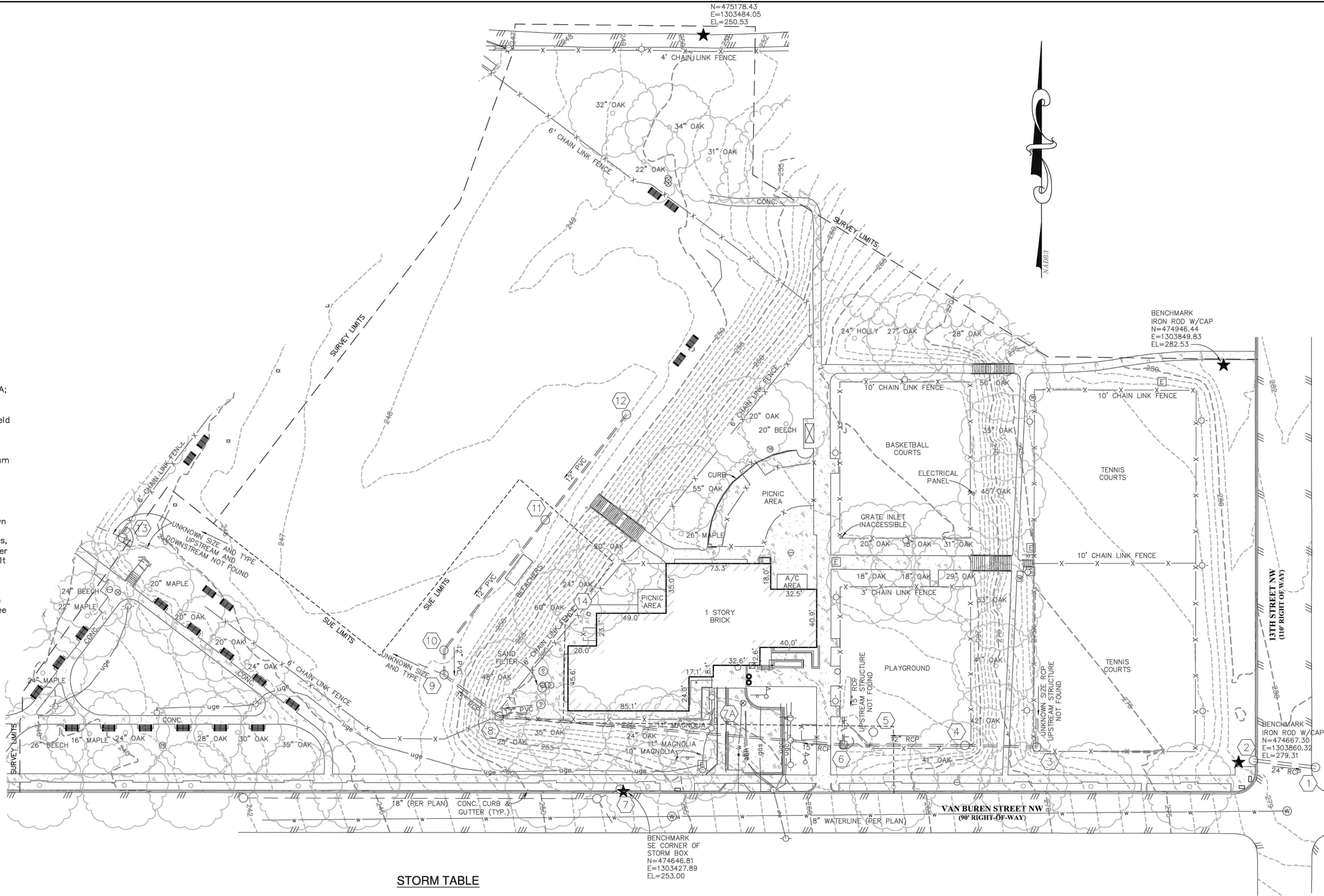
#### DRAPER ADEN ASSOCIATES REVIEW

THESE PLANS HAVE BEEN SUBMITTED TO TECHNICAL AND QUALITY REVIEWS BY:

NAME: ANTONIO COBIN		7/18/2019
SURVEY PARTY CHIEF	SIGNATURE	DATE
NAME: JOHN L. ROBERTSON P.E.		7/18/2019
SUBSURFACE UTILITY ENGINEER	SIGNATURE	DATE
NAME: CHAD MARSHALL		7/18/2019
PROJECT SURVEYOR	SIGNATURE	DATE
NAME: L.W. KNIGHTING		7/18/2019
QUALITY REVIEWER	SIGNATURE	DATE

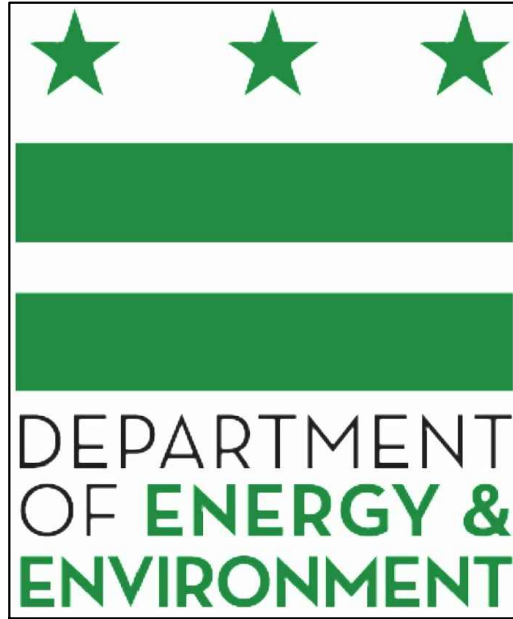
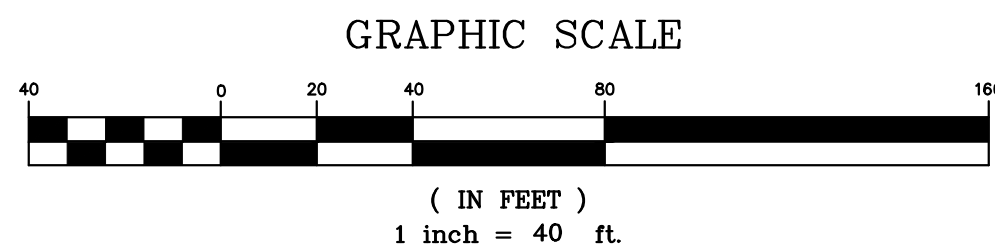
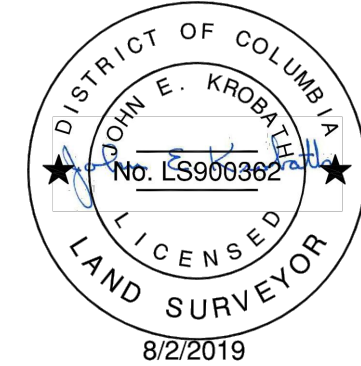
#### LEGEND

--- -- Property Line	○ Rod Found	[f] Electric Box
---1000--- Contour	□ Monument Found	● Guy Pole
g Gas Line	○ Telephone Pedestal	⊕ Electric Marker
ohp Overhead Power	Ⓣ Telephone Manhole	⊖ Electrical Manhole
ss--○--ss Sanitary Sewer and Manhole	☒ Telephone Box	⌘ Utility Pole
==○== Storm Line and Manhole	⚡ Fire Hydrant	[E] Electric Transformer
==□== Storm Line and Inlet	⊗ Water Valve	☆ Ground Light
catv Underground Cable TV	⊕ Water Meter	⊙ Light Pole
uge Underground Electric	⊙ Well	⊙ Fiber Optic Pedestal
ugt Underground Telephone	★ Benchmark	[F] Fiber Optic Handhole
fo Underground Fiber Optic	● Bollard	△ Gas Vent
unk Unknown Utility	⚓ Sign (1-post)	○ Gas Valve
w Waterline	⚓ Sign (2-post)	⊗ Gas Meter
/// Asphalt	+1561.3 Spot Elevation	○ Sewer Clean Out
Building	○ Deciduous Tree	⊕ Wood Post
---x--- Fence (as noted)	☀ Evergreen Tree	⊕ Metal Post
Stream	☀ Shrub	☒ Gravel
Treeline	☒ Concrete	☒ Picnic Table
Guy Wire	☒ Bench	Ⓣ Trash Can
	☒ Bike Rack	



#### STORM TABLE

- |   |  |
|---|--|
| 1 CURB INLET<br>TOP=280.11<br>24" INV. IN=273.86 (NW)   | 9 MANHOLE<br>TOP=247.62<br>12" INV. IN=242.12 (N)<br>15" INV. IN=242.32 (SE)<br>INV. OUT=241.82 (NW) |
| 2 CURB INLET<br>TOP=279.45<br>24" INV. OUT=274.40 (SE)  | 10 GRATE<br>TOP=246.39<br>12" INV. IN=242.78 (S)<br>12" INV. OUT=242.78 (NE)                         |
| 3 MANHOLE<br>TOP=274.26<br>INV. IN=264.86 (N)<br>INV. OUT=264.76 (W)                                      | 11 GRATE<br>TOP=246.83<br>12" INV. IN=243.28 (NE)<br>12" INV. OUT=243.18 (SW)                        |
| 4 MANHOLE<br>TOP=262.15<br>INV. IN=258.15 (E)<br>12" INV. OUT=257.85 (W)                                  | 12 GRATE<br>TOP=247.35<br>12" INV. OUT=244.90 (SW)   |
| 5 DRAIN GRATE<br>TOP=261.35<br>CANT ACCESS INVERTS  | 13 INLET<br>TOP=248.64<br>INV. IN=244.94 (NW)<br>INV. OUT=236.99 (SW)                                |
| 6 MANHOLE<br>TOP=261.33<br>INV. IN=256.28 (N)<br>12" INV. IN=256.24 (E)<br>15" INV. OUT=256.03 (SW)       | 14 GRATE<br>TOP=260.97<br>COULD NOT OPEN NOR PROBE<br>FOR INVERTS                                    |
| 7 CURB INLET<br>TOP=252.98<br>COULD NOT ACCESS  |  |
| 7A GRATE<br>TOP=259.39<br>BOTTOM=256.29   |  |
| 8 MANHOLE<br>TOP=260.71<br>12" INV. IN=250.71 (NE)<br>15" INV. IN=252.21 (NE)<br>15" INV. OUT=248.06 (NW) |  |



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#### DPR II - 4 PARKS STORMWATER IMPROVEMENTS

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#### EXISTING CONDITIONS

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Checked: L. WHEELER

Date: AUGUST 2019  
Revisions:

C100

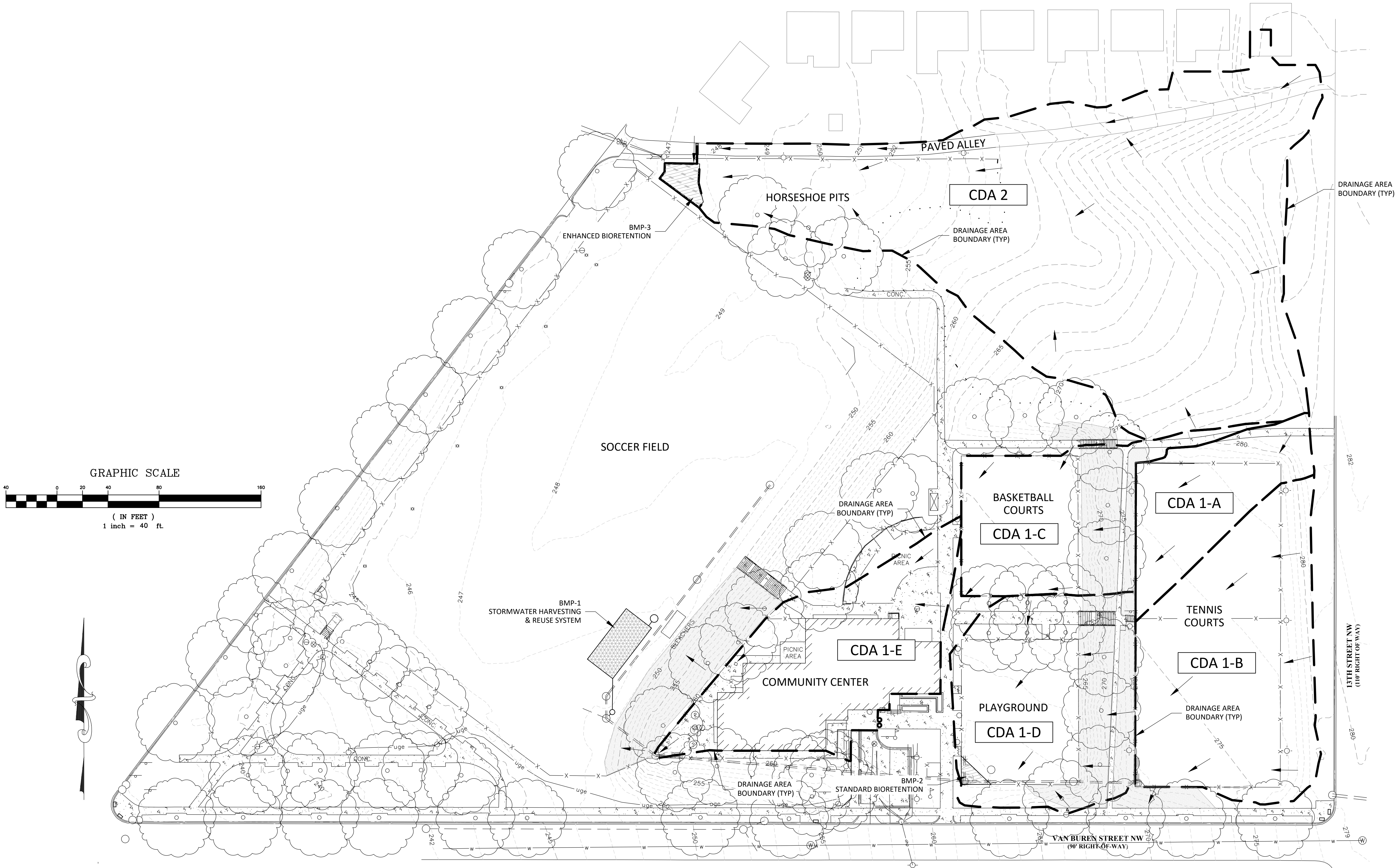


BMP Scorecard

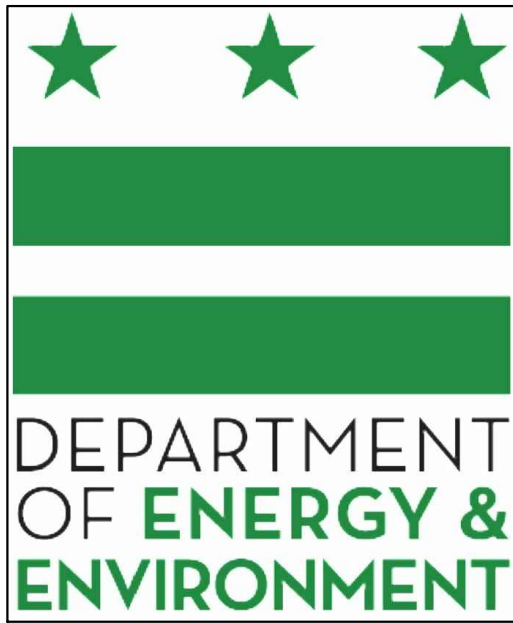
Fort Stevens Community Center

BMP Description	CDA (sf)					SWRv Required (cf)	Volume Provided (cf)	Inches Runoff Captured per Imperv Acre	Pollutant Removal Rates		
	Natural	Impervious	Turf	BMP	Total				P	N	TSS
Stormwater Recycle/Reuse (TOTAL) <sup>1</sup>	0	72,080	27,640	250	99,970	7,564	4,680	0.8	66%	55%	70%
CDA 1A (North Tennis Courts)	0	8,590	2,415	0	11,005						
CDA 1B (South Tennis Courts)	0	20,860	7,035	0	27,895						
CDA 1C (Basketball Courts)	0	11,400	5,015	0	16,415						
CDA 1D: Replace Playground Bioretention <sup>2</sup>	0	12,700	9,730	250	22,680	1,475	410	0.4	45%	39%	49%
CDA 1E (Community Center)	0	18,530	3,445	0	21,975						
CDA 2: Horseshoe Pit Bioretention Basin	55,320	5,200	19,455	700	80,675	1,050	1,050	2.1	78%	67%	84%

<sup>1</sup> Assumes 35,000 gallons storage.  
<sup>2</sup> Include diversion of spray park water. Assumes same approximate footprint as existing.



DRAINAGE AREAS  
SCALE: 1"=40'



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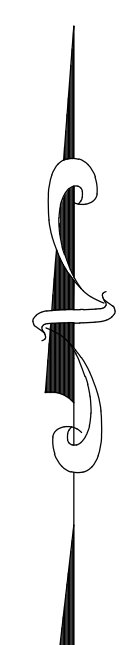
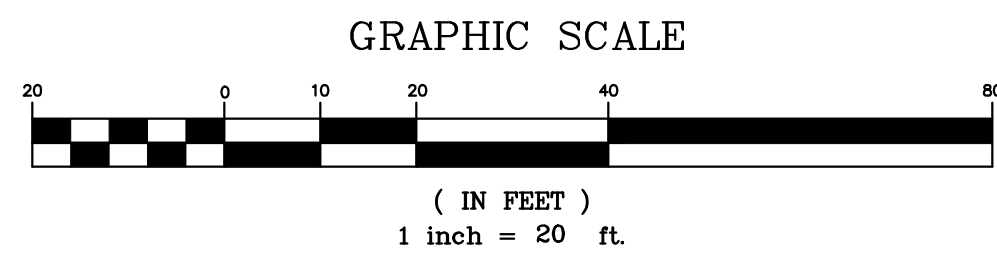
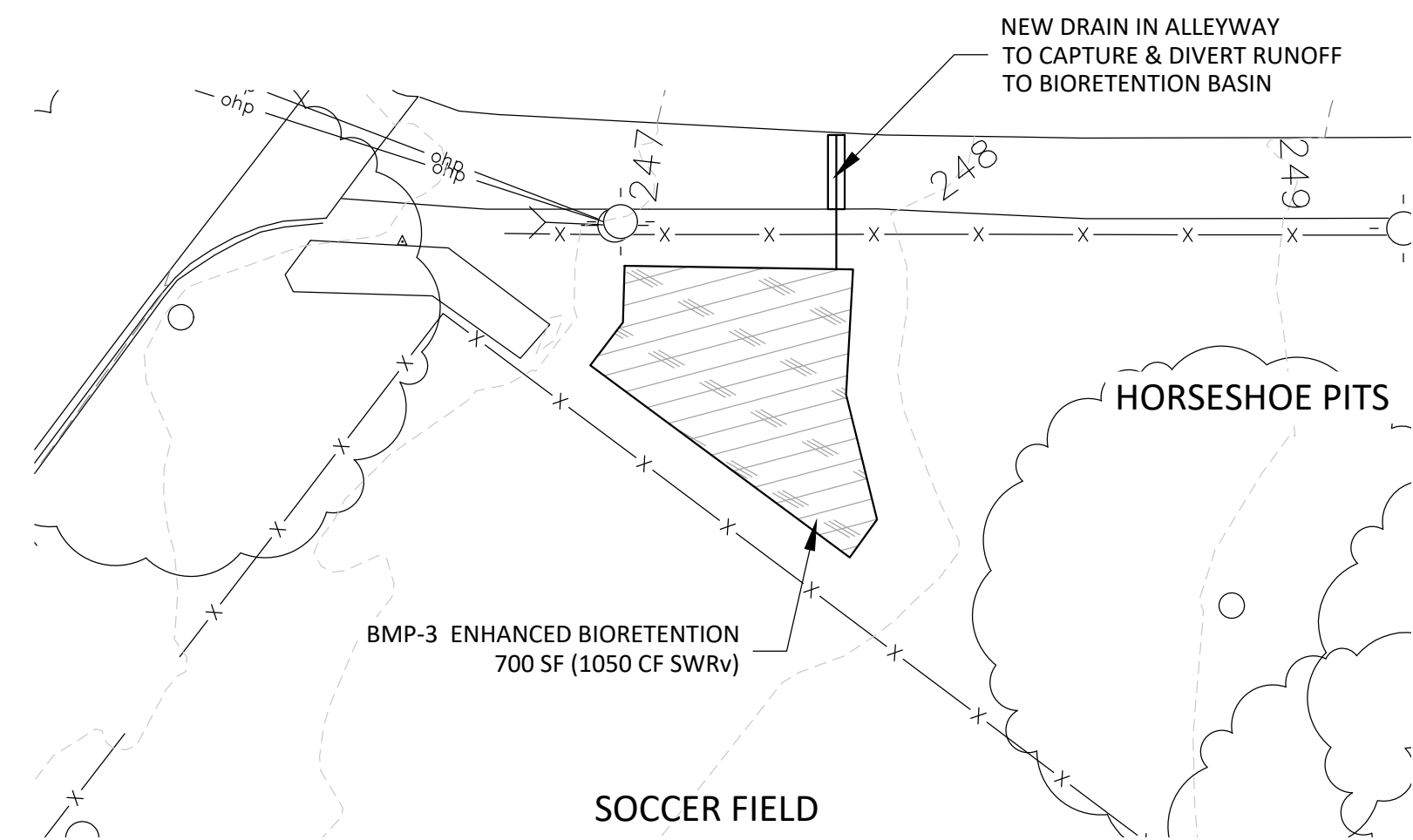
DRAINAGE AREAS

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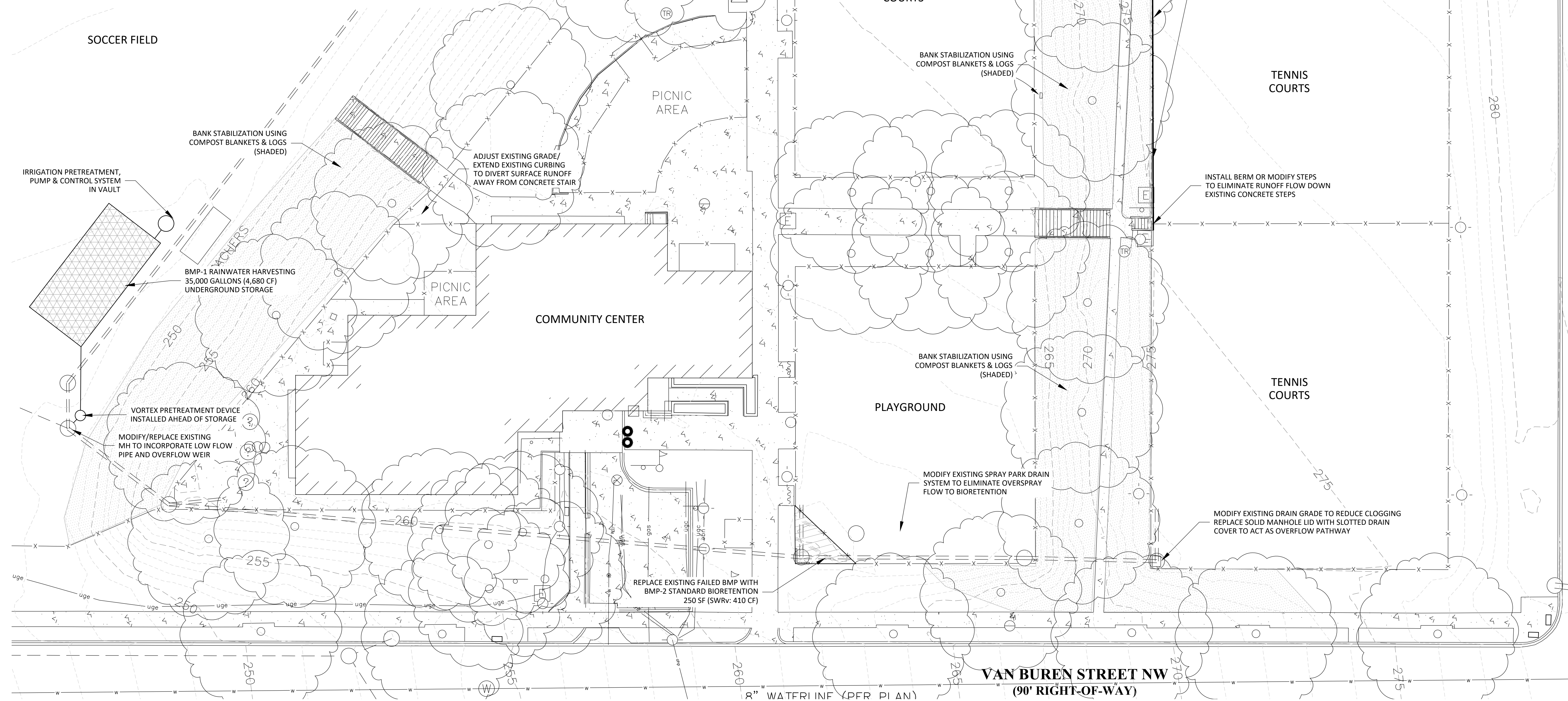
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C300





**STORMWATER PLAN - HORSESHOE PIT AREA**  
SCALE: 1"=20'



**STORMWATER PLAN**  
SCALE: 1"=20'



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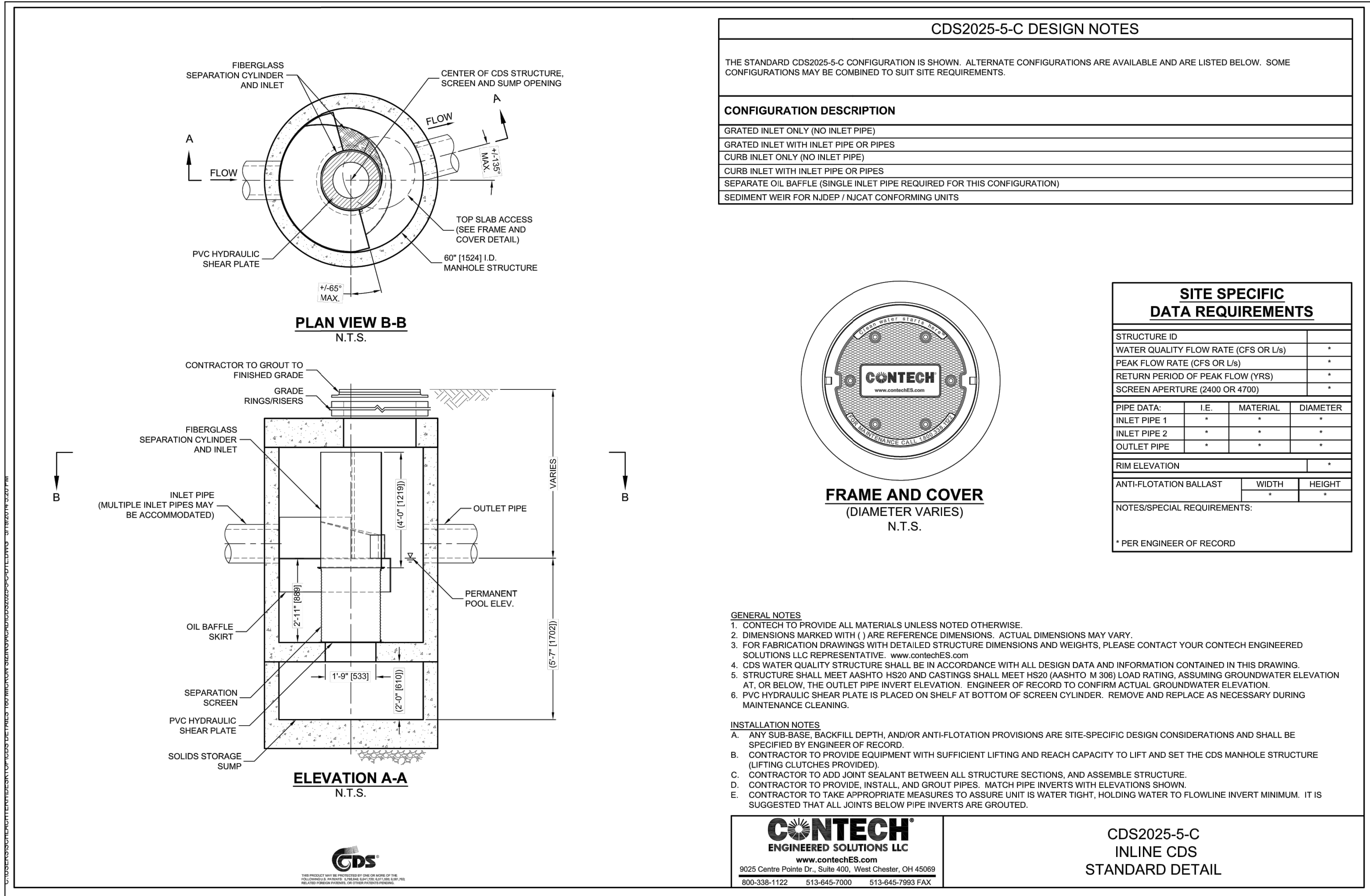
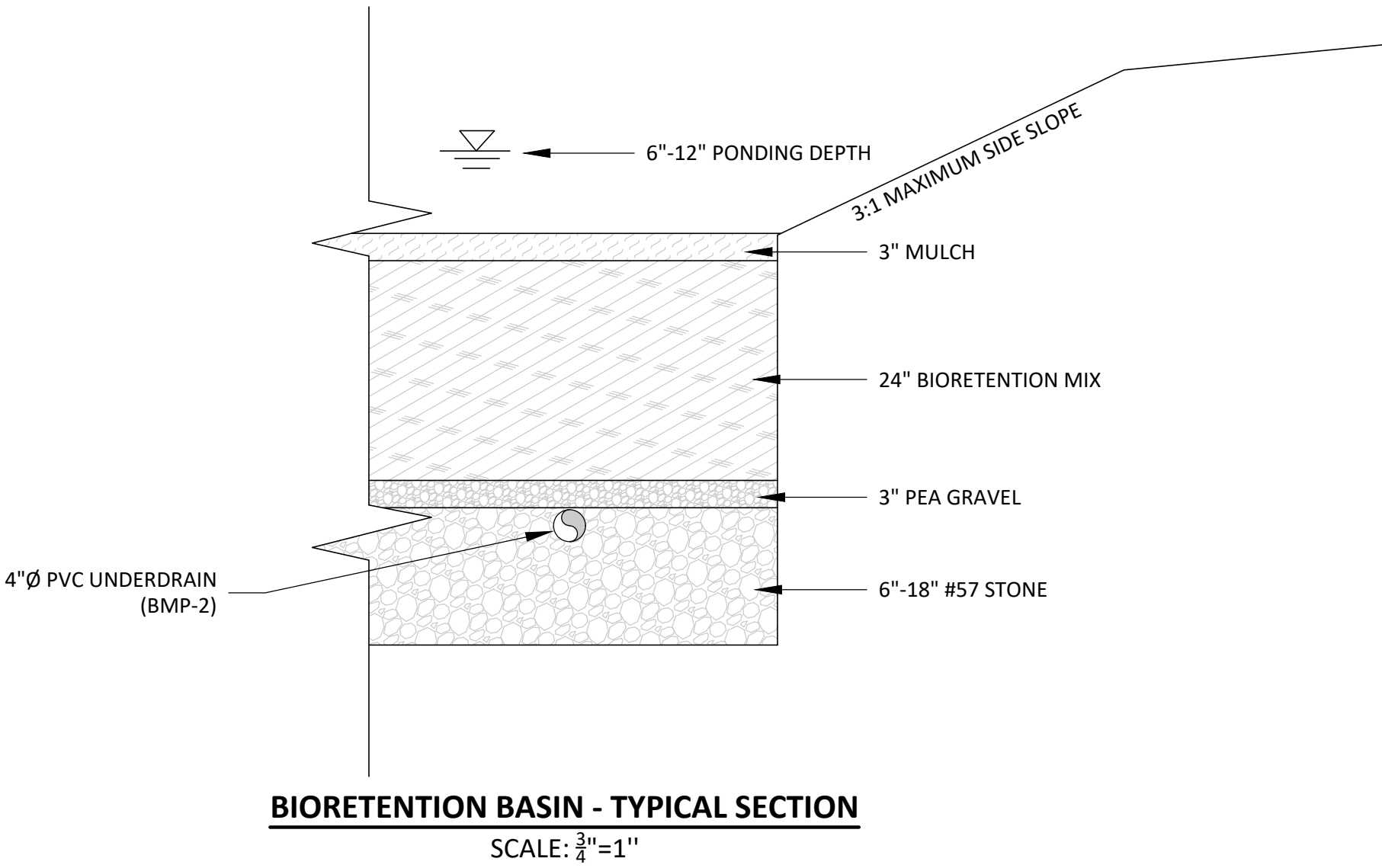
**STORMWATER  
MANAGEMENT PLAN**

Designed: C. SONNE  
Drawn: C. SONNE  
Checked: L. WHEELER

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## STORMWATER DETAILS

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Drawn: C. SONNE  
Checked: L. WHEELER

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